KV-1392R/1393R

RM-717 RM-72

SERVICE MANUAL

US Mode

KV-1392R
Chassis No. SCC-A81C-
KV-1393R
Chassis No. SCC-A81B-

PHOTO: KV-1392R

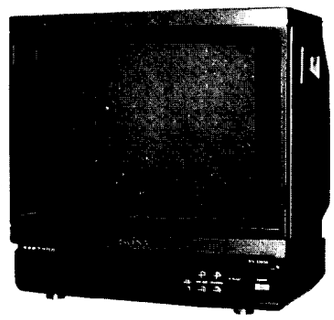

PHOTO: KV-1393R

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SPECIFICATIONS

Note: The service manual for RM-717, RM-72 has been issued separately.

KV-1392R

Television system	American TV standards
Channel coverage	VHF: channels 2–13 UHF: channels 14–69 Cable TV channels 1–125
Picture tube	Trinitron tube **13-inch picture measured diagonally** 14-inch picture tube measured diagonally 90-degree deflection
Output	Earphone jack (minijack)
Power requirements	120 V AC, 60 Hz
Power consumption	97 W
Accessories supplied	VHF/UHF telescopic dipole antenna AN-18 (1) Antenna connector (1) Remote Commander RM-717 (1) with 2 size AA batteries
Optional accessories	U/V mixer EAC-66

Design and specifications are subject to change without notice.

KV-1393R

Television system	American TV standards
Channel coverage	VHF: channels 2–13 UHF: channels 14–69 Cable TV channels 1–125
Picture tube	Trinitron tube **13-inch picture measured diagonally** 14-inch picture tube measured diagonally 90-degree deflection
Inputs video	1V p-p, 75 ohms unbalanced, sync. negative
audio	408 mV rms (100% modulation, 47 kilohms)
Output	Earphone jack (minijack)
Power requirements	120 V AC, 60 Hz
Power consumption	97 W
Accessories supplied	VHF/UHF telescopic dipole antenna AN-18 (1) Antenna connector (1) Remote Commander RM-729 with 2 size AA batteries
Optional accessories	U/V mixer EAC-66 Connecting cables VMC-606M/607M etc.

Design and specifications are subject to change without notice.

MICROFILM

TRINITRON® COLOR T

SONY

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WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any).
   Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

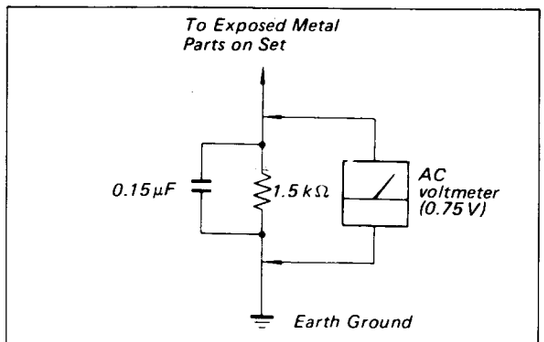


Fig. A. Using an AC voltmeter to check AC leakage.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60–100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

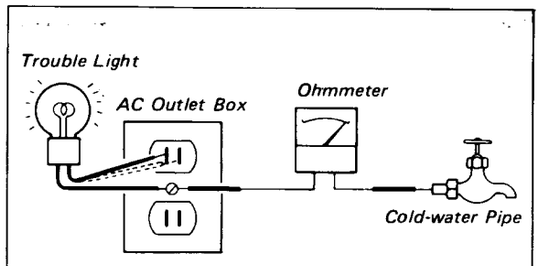
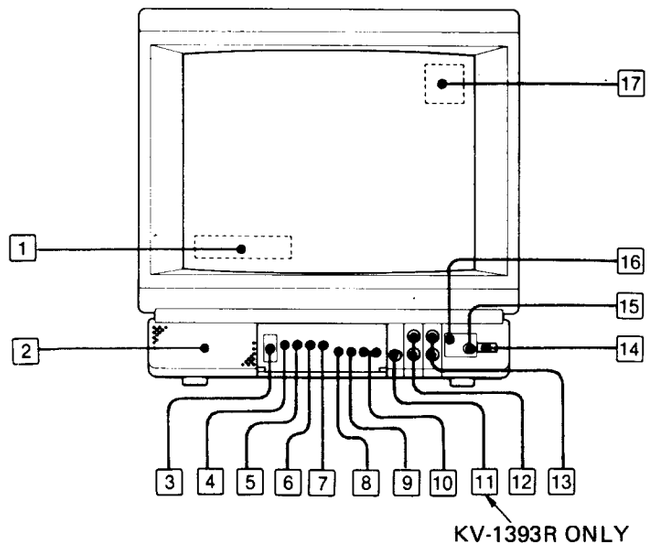


Fig. B. Checking for earth ground.

SECTION 1
OUTLINE

1-1. LOCATION AND FUNCTION OF CONTROLS

Front



1 **Bar display**
Indicates level of volume and picture contrast.

2 **Speaker**

3 **Earphone jack (minijack)**

4 **BRIGHT (brightness) control**
Turn clockwise for more brightness or counterclockwise for less.

5 **COLOR control**
Turn clockwise for more color intensity or counterclockwise for less.

6 **HUE control**
Turn clockwise to make the tones greenish or counterclockwise to make them purplish.

7 **CABLE selector**
To view CATV programs, set this selector to ON.

8 **ERASE button**
Used for channel presetting. Press to erase channels.

9 **ADD button**
Used for channel presetting. Press to add channels.

10 **PICTURE buttons**
Press PICTURE "+" to increase picture contrast, or "–" to decrease it.

11 **TV/VIDEO button (KV-1393R ONLY)**
Press to view the picture from the connected VCR.

12 **VOLUME buttons**
Press VOL "+" to increase volume, or "–" to decrease it.

13 **CHANNEL scan buttons**
Press "+" for higher-numbered channels and "–" for lower-numbered channels.

14 **POWER switch**
Press to turn the unit on.

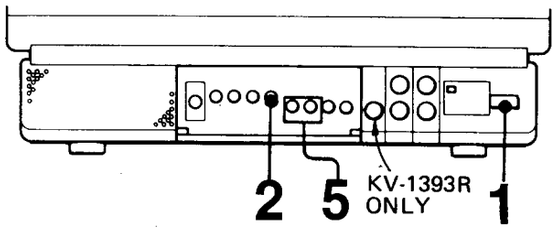
15 **Remote control detector**
Point the Remote Commander towards this detector.

16 **SLEEP lamp**
Lights up when the SLEEP button on the Remote Commander is pressed.

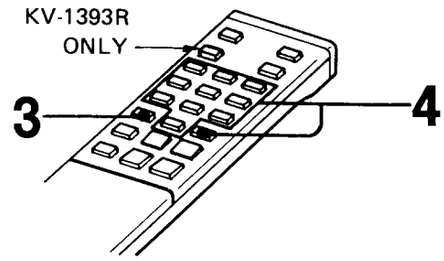
17 **On-screen display**
Shows channel numbers, "MUTING", and "SLEEP" indications.

1-2. PRESETTING CHANNELS

By adding and erasing channels, you can preset your TV so that only the desired channels appear in sequence when the CH "+" or "–" is pressed.



Receivable channels of your unit are:
VHF: 2–13 UHF: 14–69 CATV: 1–125



PREPARATION

1 POWER

Press POWER on the TV.

2 OFF ON

CABLE

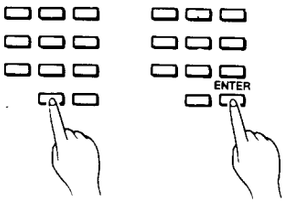
Set the CABLE selector to:
ON for CATV channels
OFF for VHF/UHF channels

ADDING AND ERASING CHANNELS

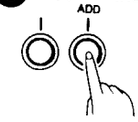
3 Press DISPLAY to make the channel number appear.

16

4 Press the number(s) of the channel to be added or erased, then press ENTER.

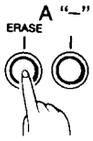


5 To add, press ADD.
A "+" indication will appear.



+16

To erase, press ERASE.
A "–" indication will appear.



–16

Repeat steps **4** and **5** for other channels to be added or erased. To add erased channels again, repeat the steps in adding.

Note
If you erase a VHF or UHF channel, the cable TV channel with the same number will also be erased, and vice versa.

CABLE TV CHANNEL CHART*

Cable TV systems use letters or numbers to designate channels. To tune in a channel, refer to this chart.

Check with your local cable TV company for more complete information on the available channels.

Number on this TV	1	5	6	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Corresponding CATV channel	A–8	A–7	A–6	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q

31	32	33	34	35	36	37	38	39	.....	93	94	95	96	97	98	99	100	101	102	.....	123	124	125
R	S	T	U	V	W	W+1	W+2	W+3	.....	W+57	W+58	A–5	A–4	A–3	A–2	A–1	W+59	W+60	W+61	.....	W+82	W+83	W+84

* The designation of the cable TV channels conforms to the EIA/NCTA recommendation.

Note
Pay cable TV systems use scrambled or encoded signals and require special converters (decoders) in addition to the normal cable connection.

1-3. VCR CONNECTIONS

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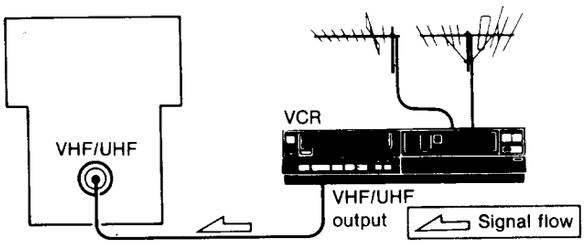
Connect a VCR to the VHF/UHF antenna terminal and connect the external antenna to the VCR. For details on the connection, see the instruction manual of the VCR.

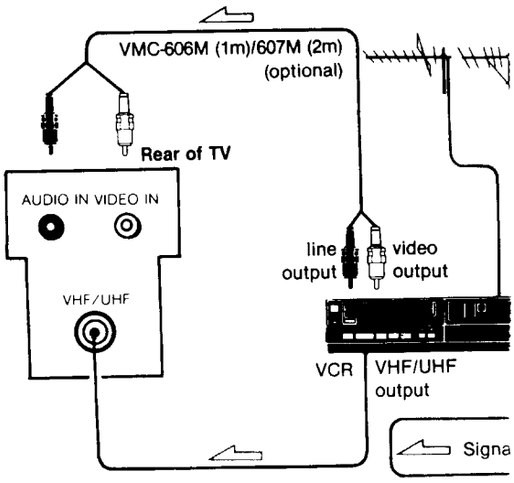
Keep the VCR away from the TV if the display or sound is affected.



KV-1393R

With this connection, you don't have to select channel 4 to view VCR playback.

Preparations

1 Turn on the TV.
2 Press the TV/VIDEO button so that the "VIDEO" indication appears on the screen.

For operation, refer to the instruction manual furnishe with the VCR.